CLAIMS

1. A brake assembly comprising:

a rotor;

a brake caliper assembly including an actuator motor;

at least one friction pad operably attached to the caliper assembly, wherein the actuator motor is operable to force the friction pad into frictional engagement with the rotor; and

at least one thermal conduit extending distally from the actuator motor for dissipating heat energy away from the actuator motor.

2. The assembly of claim 1 wherein the thermal conduit comprises a material having a thermal conductivity greater than that of the brake caliper assembly.

3. The assembly of claim 1 wherein the thermal conduit comprises at least one elongated member.

4. The assembly of claim 1 wherein the thermal conduit comprises at least one flexible member.

5. The assembly of claim 1 wherein the thermal conduit comprises a heat pipe.

6. The assembly of claim 1 wherein the thermal conduit is operably attached to a suspension component.

7. The assembly of claim 1 wherein the thermal conduit is operably attached to an actuator motor stator.

8. The assembly of claim 1 wherein the thermal conduit is manufactured substantially from a material selected from a group consisting of aluminum, copper, brass, nickel, steel, a metal, a metal alloy, and a composite.

9. The assembly of claim 1 further comprising a heatsink member operably attached to the thermal conduit, the heatsink member including a plurality of fins.

10. A method of dissipating heat from a brake assembly, the method comprising:

providing an actuator motor;

providing a thermal conduit extending distally from the actuator motor; and

conducting heat away from the actuator motor along the thermal conduit.

11. The method of claim 10 wherein conducting heat from the actuator motor along the thermal conduit comprises transferring heat from a first material to a second material wherein the second material comprises a thermal conductivity greater than the first material.

12. The method of claim 10 further comprising moveably flexing the thermal conduit.

13. The method of claim 10 further comprising providing a dissipation site thermally coupled to the thermal conduit.

14. The method of claim 13 further comprising convecting heat from the dissipation site.

15. The method of claim 13 further comprising conducting heat from a brake assembly component other than the actuator motor.

16. A brake assembly comprising:

actuator motor means;

thermal conduit means extending distally from the actuator motor means; and

means for conducting heat from the actuator motor means along the thermal conduit means.

17. The assembly of claim 16 further comprising means for flexing the thermal conduit means.

18. The assembly of claim 16 further comprising dissipation site means thermally coupled to the thermal conduit means.

19. The assembly of claim 18 further comprising means for convecting heat from the dissipation site means.

20. The assembly of claim 16 further comprising means for conducting heat from a brake assembly component other than the actuator motor means.